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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,863	06/17/2005	Thomas Ralph Edwards Greenwell	357358.00006-US	6693

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EXAMINER	
RAYYAN, SUSAN F	
ART UNIT	**PAPER NUMBER**
2167	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/539,863	GREENWELL ET AL.	
	Examiner	Art Unit	
	SUSAN FOSTER RAYYAN	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *19 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. Claims 1-27 are pending.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on August 26, 2005 was filed before First Office Action. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-9, 17, 19, 24-27 are rejected under 35 U.S.C. 102(a) as being anticipated by WO 01/78319A2 issued to Tabitha Ferguson et al ("Ferguson").

As per claim 1 Ferguson anticipates:

Method of automatically replicating data objects between a mobile device and a server, connected together via a wireless network, in which the timing of data

replication across the network is determined by a network operator applying parameters that make efficient usage of network bandwidth (Figure 23, page 47, line 14- page 53, line 24, as synchronization between mobile device and host system, transmission of bundled information at non-peak network or transmission times) ;

in which a change log (page 48, line 31-page 49, line 6, as "database 1950 ") lists all objects at the device and/or server to be replicated and the parameters then comprise a weight associated with each object that defines how urgently that object needs to be replicated (page 49 lines 5-17, as “criteria” includes maximum message size , maximum time reached, type of message, destination address …. and “configuration parameters” to include time of day, day of week .... and “received network parameters” include cycle based on activity level, network airtime.);

the parameters further comprise a threshold that is a function of time, with the weight of each object being locally compared to the threshold at a given time and the outcome of the comparison determining whether the object is sent for replication or not at that time (page 52, lines 20-22, as criteria to decide whether to send immediately or not and page 53, lines 19-25, as transmission may be delay to non-peak times));

characterized in that all criteria that are relevant to how urgently an object needs to be replicated are represented by a single weight associated with that object replicated (page 49 lines 5-17, as “criteria” includes maximum message size , maximum time reached, type of message, destination address …. and “configuration parameters” to include time of day, day of week ... and “received network parameters” include cycle based on activity level, network airtime. Page 53, lines 21-23, criteria to decide whether to send immediately or not)).

As per claim 2, same as claim arguments above and Ferguson anticipates: in which a connection is established at a given time if the weight of any object exceeds the threshold at that time (page 49 lines 5-9 and page 51 lines 15-26 as “maximum message size, maximum time reached , specific type of message, destination address, a content identifier … and a set of configuration parameters") and (page 52, lines 20-22, as criteria to decide whether to send immediately or not and page 53, lines 19-25, as transmission may be delay to non-peak times)).

As per claim 3, same as claim arguments above and Ferguson anticipates: in which the weight of an object at a given time is a function of one or more of the following:

(a) Direction of data replication (device to server or server to device) (b) Shelf life, defining the time or duration after which the object will be automatically

deleted if still present in the change log (c) Whether the object is over writable (d) Size in bytes (e)Time entered into the change log

(f) Priority (g)Time out interval (h) Assigned time for replication (i) User assignment of a non-default priority to a given object (j) Memory available at (page 52, lines 20-22, as criteria to decide whether to send immediately or not and page 53, lines 19-25, as transmission may be delay to non-peak times) and page 53, line 23 delay transmission to off peak hours).

As per claim 4, same as claim arguments above and Ferguson anticipates:

which the network operator can cause the weight of an object to be altered at any time(page 49, network parameters may be set by a network operator).

As per claim 5 same as claim arguments above and Ferguson anticipates:
in which the network operator can cause the threshold to be altered at any time (page 49, network parameters may be set by a network operator).

As per claim 6, same as claim arguments above and Ferguson anticipates:
in which the threshold varies over time in such a way that efficient use is made of available bandwidth(page 52, lines 20-22, as criteria to decide whether to send immediately or not and page 53, lines 19-25, as transmission may be delay to non-peak times) and page 53, line 23 delay transmission to off peak hours).

As per claim 7, same as claim arguments above and Ferguson anticipates: in which the threshold can vary over time in a different way for different groups of end-users, individual end-users or applications(page 52, lines 20-22, as criteria to decide whether to send immediately or not and page 53, lines 19-25, as transmission may be delay to non-peak times) and page 53, line 23 delay transmission to off peak hours).

As per claim 8, same as claim arguments above and Ferguson anticipates: in which dynamic varying of the threshold can occur as cell or network loadings change(page 53, lines 19-25, as transmission may be delay to non-peak times) and page 53, line 23 delay transmission to off peak hours, transmit or bundled dynamically to provide user maximum benefit).

As per claim 9, same as claim arguments above and Ferguson anticipates: in which dynamic varying of the threshold can occur to encourage uptake of a new data replication service (page 53, lines 17-25, determination as to whether to transmit or bundle can be handled dynamically).

As per claim 17, same as claim arguments above and Ferguson anticipates: in which an object to be replicated is assigned a shelf life which defines a time or duration after which the object will be deleted automatically if not replicated page 53, lines 1-25.

As per claim 19, same as claim arguments above and Ferguson anticipates: in which, once a connection initiating object has been replicated, then further objects in a change log and pending replication are sent as well (page 50 line 30 to page 51 line 5 (each mobile device will get information to their mobile as the data and commands become available).

As per claim 24, same as claim arguments above and Ferguson anticipates: in which the network operator can vary the opportunism threshold(page 49, network parameters may be set by a network operator).

As per claim 25 same as claim arguments above and Ferguson anticipates: in which the actual time of replication is a function of the state of the mobile device, the state of the network and the parameters(page 49 lines 5-17, as "criteria" includes maximum message size , maximum time reached, type of message, destination address …. and "configuration parameters" to include time of day, day of week ... and "received network parameters" include cycle based on activity level, network airtime. Page 53, lines 21-23, criteria to decide whether to send immediately or not)).

Claims 26 is rejected based on the same rationale as claim 1 above.

Claims 27 is rejected based on the same rationale as claim 1 above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 10-16, 18, 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ferguson in view of EP 0794646A2 issued to Stefan Hild ("Hild").

As per claim 10, same as claim arguments above and Ferguson does not explicitly teach in which the threshold can vary depending on one or more of the following:(a) current time(b) device roaming status(c) cell or network loading (d)time since last replication(e)user tariff . Hild does teach this at (page 9, column 15 line 27 to column 16 line 7 as exact timing of synchronization determined by several factors: "weights" and specified limit (threshold) , periodic updates, current network cost and availability, on-demand basis. Column 11, lines2, when to update the files is based on criteria such as time elapsed since last update). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson with the threshold can vary depending on one or more of the following:(a) current time(b) device roaming status(c) cell

or network loading (d)time since last replication(e)user tariff to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 11, same as claim arguments above and Ferguson does not explicitly teach in which, if the weight of no object exceeds the threshold at a given time, the time interval that will elapse before the weight of any object exceeds the threshold is calculated and a timer set for that time interval. Hild does teach this at column 11, lines2, when to update the files is based on criteria such as time elapsed since last update. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson with in which, if the weight of no object exceeds the threshold at a given time, the time interval that will elapse before the weight of any object exceeds the threshold is calculated and a timer set for that time interval to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 12, same as claim arguments above and Ferguson does not explicitly teach in which the time interval is re-calculated if (a) a new object is added to the change log (b)a new threshold is deployed (c)the timer expires (d)cell or network loading alters (e)device memory falls below a preferred level (f) the device detects that its roaming state changes (g) a new application is activated on the device(h) a network connection is terminated. Hild does teach at (page 9, column 15 line 27 to column 16 line 7 as exact timing of synchronization determined by several factors: "weights" and specified limit (threshold) , periodic updates, current network cost and availability, on-demand basis. Column 11, lines2, when to update the files is based on criteria such as time elapsed since last update). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson within which the time interval is re-calculated if (a) a new object is added to the change log (b)a new threshold is deployed (c)the timer expires (d)cell or network loading alters (e)device memory falls below a preferred level (f) the device detects that its roaming state changes (g) a new application is activated on the device(h) a network connection is terminated to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 13, same as claim arguments above and Ferguson does not explicitly teach in which the end-user of the device can override default replication timing in respect of a specific object or type of object. Hild does teach

this limitation at column 16, update on demand. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson with in which the end-user of the device can override default replication timing in respect of a specific object or type of object to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 14, same as claim arguments above and Ferguson does not explicitly teach in which an object to be replicated is assigned a time limit by which time replication must occur. Hild does teach this limitation at column 16, lines 3-8 as update on demand. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson in which an object to be replicated is assigned a time limit by which time replication must occur to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 15, same as claim arguments above and Hild teaches:
in which the time limit is dynamic at column 16, lines 3-8 as update on demand.

As per claim 16, same as claim arguments above and Hild teaches:

in which the time limit alters if memory on the device changes or if the device roams to a new network at column 16, lines 3-8 as update on demand.

As per claim 18, same as claim arguments above and Ferguson does not explicitly teach in which different parameters enable the network operator to offer end-users different levels of data replication service, each associated with a different tariff. Hild does teach this limitation at (column 15 lines 45-57, current network cost and availability. “Cheaper rate” and “cheaper network”.). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson with in which different parameters enable the network operator to offer end-users different levels of data replication service, each associated with a different tariff to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 20, same as claim arguments above and Ferguson does not explicitly teach in which an opportunism threshold function determines the further objects that are sent. Hild does teach this limitation at column 15, lines 46-59 as current network costs and availability. It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Ferguson with in which an opportunism threshold function determines the further objects

that are sent to provide an improved means for managing data replication across a plurality of computers which are in communicate over a mobile communication network as described by Hild at column 4, lines 3-6.

As per claim 21, same as claim arguments above and Hild teaches:
in which the opportunism threshold changes if the device is on a roaming network at column 15, lines 46-59 as current network costs and availability.

As per claim 22, same as claim arguments above and Hild teaches:
in which the opportunism threshold changes depending on whether a cell loading threshold of the cell the device is located in is exceeded at column 15, lines 46-59 as current network costs and availability.

As per claim 23, same as claim arguments above and Hild teaches:
in which the opportunism threshold is applied consistently by device and server, with changes to the threshold communicated across the network at column 15, lines 46-59 as current network costs and availability.

Response to Arguments

7. Applicant argues "that the wrong set of claims were inadvertently examined by the Examiner. The present application is the US national phase of International Application No. PCT/GB2003/005598. The international application was published with claims 1-30. However, these claims were amended on February 1, 2005 in response to the first Written Opinion dated August 2, 2004, and then again on March 25, 2005, in response to the second Written Opinion issued on February 17, 2005. As a result, claims 1-27, as amended during international examination, were presented for examination in the U.S. Patent Office, and WIPO conducted the International Preliminary Examination based on these claims. The International Preliminary Examination Report (IPER) was issued by WIPO on April 25, 2005. At the time the present U.S. national phase application was filed, applicant submitted, among other things, the IPER, dated April 25, 2005, which included "amended sheets" containing the claims as amended (which claims were examined for purpose of preparing the IPER), as well as a copy of the amended version of the application and drawings." The Examiner has issued a new non-final Office Action.

Contact Information

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUSAN FOSTER RAYYAN whose telephone number is (571)272-1675. The examiner can normally be reached on M-F, 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SUSAN FOSTER RAYYAN/

Examiner, Art Unit 2167

November 18, 2009

/John R. Cottingham/

Supervisory Patent Examiner, Art Unit 2167